

Comment 1880

Response
Section in
Chapter 35

January 24, 2008

To: Edward Woolford
Federal Highway Administration, Utah Division
2520 West 4700 South Suite, 9A
Salt Lake City, Utah 84118

**Comments for the DRAFT EIS for Mountain View Corridor
Utahns for Better Transportation and Sierra Club
January 24, 2008**

35.29A

Utahns for Better Transportation and Sierra Club are opposed to the Mountain View Corridor alternative preferred by UDOT, which calls for a new north/south freeway at 5800 West. Instead, we favor looking at different scenarios that will implement an immediate robust transit system along 5600 West and give it a chance to succeed. Implementing transit first would shift us toward a more balanced regional transportation system—supporting the wishes of the people—and would reduce traffic rather than continuing the unsustainable pattern of accommodating it. With a more balanced transportation approach, future road capacity requirements could be added in a more sustainable way that would complement this system as development patterns support increased mixed uses. A secondary benefit to this approach would be wiser, more strategic, phased use of public transportation investments given limited available resources. Additional comments have been prepared for us by Smart Mobility, Inc. and are attached to this document.

35.2.3A

First, building a new freeway at 5800 West goes against the will of the people who live and work along the Wasatch Front. In November 2006, they voted overwhelmingly to raise their own taxes (64 percent in favor in Salt Lake County and 69 percent in favor in Utah County) to speed up the implementation of additional TRAX lines in Salt Lake County and complete the commuter rail from Ogden to Provo—a clear demonstration of the public's commitment to transit. A new freeway also goes against the advice of the Governor's Blue Ribbon Advisory Council (BRAC) whose report to the Governor in October 2007 supported the development and implementation of an aggressive mass transit strategy.

35.2.1P

Second, the DEIS uses an outdated model (Version 5.0) to measure the performance of the transportation system resulting in "a bias toward new freeway investments," as well as a biased and result-oriented statement of project purpose and set of decision criteria that tend to predetermine the outcome rather than supporting a full and fair consideration of a wider range of reasonable alternatives. (See *Comments on the Mountain View Corridor DEIS*, by Smart Mobility, Inc.). The newest model (Version 6.0), which is an improvement over Version 5.0, must be used consistently throughout the DEIS to

1

Comment 1880 (continued)

Response
Section in
Chapter 35

35.12.1F

determine the most accurate numbers possible, and to comply fully with the requirements of NEPA.

Third, a new north-south freeway will encourage more traffic, resulting in increased air pollution, a growing problem along the Wasatch Front and one that our Governor has determined is one of his top three priorities to address during his term. A new freeway would not support this initiative to clean up our air and, in fact, would do the opposite and make the problem worse. A special concern is the proximity of several schools to the proposed road and the negative health impacts on school children who would breathe dirtier air.

Quality Growth Planning

The integration of transportation and land use planning for population growth in the Greater Wasatch Area has been the subject of numerous public/private partnerships grappling with the complex issues of growth. Indeed, Envision Utah working with elected officials, business representatives and citizen participants, has received national attention for its proactive approach to planning for quality growth.

In the lead up to the 2002 Olympic Winter Games in Salt Lake City, we made significant improvements to our transportation system by beginning to build a regional transit system to provide more viable travel choices and to create a balanced system whereby all modes (walking, biking, transit, cars) have their proper role in our circulation system.

The first conference to address transportation issues along the Wasatch Front was held in March 1995. The Future Moves Conference gathered together transportation experts and community planners, "To identify transportation options that will keep us moving well into the next century." The conference highlighted the problems inherent in trying to accommodate the predictions that vehicle miles traveled will grow faster than population. The question was asked "How can we make transportation investments to allow us to grow as a community and not sacrifice our quality of life?"

In January 2000 Envision Utah published the *Quality Growth Strategy* (QGS), which laid out six primary goals that need to be addressed if we are to protect our environment and maintain our economic vitality and quality of life as we accommodate anticipated growth. The top two goals based on residents' concerns about the effects of population growth were "Enhance air quality" and "Increase mobility and transportation choices." The other four goals covered critical lands, water, housing and infrastructure. The top transportation strategy to implement the goals of the QGS was to "Promote the building of a region-wide transit system to make transit more convenient and reliable."

A planning effort involving public, private and community stakeholders developed *Wasatch Choices 2040: A Four County Land-Use and Transportation Vision* that identified growth principles and implementation strategies based on integrated land-

2

Comment 1880 (continued)

Response
Section in
Chapter 35

use/transportation planning. Two of the key principles for transportation planning from that effort are to "Develop a balanced multi-modal transportation system" and to "Support actions that reduce growth in per capita vehicle miles of travel."

In the *Wasatch Choices 2040* process four scenarios were developed to define the configuration and measure the performance of various approaches to growth. The report outlined lessons learned from the scenarios such as:

- *Mixed-use development reduces driving distances and congestion.*
- *Growth near transit opportunities encourages people to ride transit.*
- *People will walk and bike if the trip is short and the design is right.*
- *Transportation choices help determine where growth will occur.*
- *Transit is a key means to reduce congestion during the all-important rush hour.*

In 2003, Envision Utah facilitated the Mountain View Corridor Growth Choices process to run concurrently with Mountain View Corridor Environmental Impact Statement. On March 10, 2004, the various stakeholders endorsed the Mountain View Corridor Vision and each participant signed the *Mountain View Vision Voluntary Agreement* with the following Principle of Agreement:

Balanced Transportation

We desire a balanced transportation system for our future that will involve more transportation choices. The phasing and implementation of transportation investments over the next decade will affect land use development patterns and therefore affect future travel needs and the availability and effectiveness of other viable transportation choices. The sequencing of transportation investments needs to be studied to recommend the most effective and cost efficient way to meet future travel needs, reduce the rate of growth of vehicle miles traveled, improve air quality through a better balance between auto, transit, walk and bike trips, and to recommend the best way to encourage the types of land uses throughout the corridor that will support these improvements.

Mountain View Vision

Vision without action is a daydream. Action without vision is a nightmare.
—Japanese proverb

The Mountain View Vision that grew out of the Growth Choices Study is an important step, if followed, to achieve a balanced transportation system that will protect and enhance our quality of life along the Wasatch Front. The vision sets forth a planning direction that reduces automobile dependence by implementing pedestrian oriented, mixed-use centers and corridors and implementing high capacity transit as part of the transportation system. Key to achieving the vision is the optimal sequencing of

Comment 1880 (continued)

Response
Section in
Chapter 35

35.2.1Q

35.2.1R

transportation investments with the goal of reducing the rate of growth of vehicle miles traveled.

We believe that a combination of wise transportation and land use improvements in the western part of Salt Lake County will better accommodate population growth by developing 5600 West as a transit corridor linked to east-west TRAX and bus lines. In addition, we need to improve the efficiency and safety of the arterial road system with possible road capacity additions on existing corridors such as 7200 West and U-111 as western Salt Lake County grows.

This long history of sound planning for the region's future, with significant participation by a wide range of affected citizens and groups, strongly supports our proposed transit first alternative for the corridor. In addition, NEPA and the CEQ NEPA implementing regulations require that these documents (*Quality Growth Strategy*, *Wasatch Choices 2040* and *Mountain View Vision*) be considered fully in analyzing full range of alternatives to meet the project purpose and need, and in comparing the impacts of those alternatives on regional growth patterns and quality of life.

Reduction in Vehicle Miles Traveled

In simplified terms, there are two main approaches to transportation planning being practiced in the United States. One approach attempts to accommodate the prediction that vehicle miles traveled in an area will increase faster than population, because that has been the trend in the past. The second approach seeks to reduce the growth of vehicle miles traveled by prioritizing transit investments in the near term and by integrating development patterns that facilitate walk, bike and transit trips.

The importance of planning and development strategies that seek to reduce the growth rate of VMT cannot be overstated. It is the key principle in achieving a number of critical objectives: reducing automobile congestion (especially at the peak travel hours), reducing air pollution from automobiles and reducing greenhouse gas emissions. Secondary benefits include reducing automobile-related water pollution from road runoff, reducing the total cost of public transportation investments over time, and reducing private travel costs (as illustrated in the Smart Mobility Inc. comments). A number of recent studies have indeed focused on reduction of VMT per capita as the main performance measurement for evaluating the effectiveness of transportation systems. In January 2004 the United States Environmental Protection Agency (EPA) released a report *Characteristics and Performance of Regional Transportation Systems* (EPA 213-R-04-001) that compared "conventional" transportation system characteristics to "smart growth" approaches. The initial findings concluded that "[I]t seems that greater connectivity, transit availability, and pedestrian-friendliness are at least partially responsible for superior transportation and environmental performance."

Comment 1880 (continued)

Response
Section in
Chapter 35
↪

35.3C

35.2.1R

35.29C

A Summary Report, *Integrating Land Use Issues into Transportation Planning: Scenario Planning*, by Keith Bartholomew, assistant professor in the College of Architecture + Planning at the University of Utah, was published in 2005 and funded by the Federal Highway Administration under Cooperative Agreement No. DTFH61-03-H-000134. Bartholomew analyzed 80 land use-transportation scenario planning processes in the United States that sought to evaluate growth outcomes of different land use-transportation strategies. The study showed that, "Within the transportation category, the most often used measure was vehicle miles traveled (VMT)." VMT was by far the top indices used to evaluate scenarios, perhaps because it incorporates a number of important values such as numbers of trips and trip lengths, it is a major input for most air emissions models, and it relates to congestion and delay.

The Mountain View Vision called for more transportation choices, reducing the rate of growth of vehicle miles traveled and improving air quality. The preferred alternative proposed in the DEIS does not meet these objectives. Equally important, the DEIS fails to fulfill the most important requirement of NEPA because it fails to consider seriously alternatives that would achieve the main project purpose of improving regional mobility by reducing VMTs rather than the traditional, futile efforts to meet growing VMT with additional road capacity.

Sequencing and Integration

In a time of change, the order in which we develop transportation infrastructure will affect the overall outcomes and performance of our transportation system. The November 2006 vote of Salt Lake County voters was a clear demonstration of the public's commitment to transit. The public has embraced the idea that convenient, reliable transit can play a key role in reducing peak hour traffic and providing more viable transportation choices. Although additional light and commuter rail development was in the Long Range Transportation Plan for development by 2030, the 2006 vote was about moving the transit development up to 2015.

Envision Utah is seen as a national leader in promoting integrated land use-transportation planning. As noted above, scenario planning efforts to analyze the differing effects of prioritizing transit investments over new freeway construction is being practiced around the United States with promising outcomes for reducing VMT.

The MVC Sequencing Analysis performed by Parsons Brinkerhoff fails to meet the basic purpose of exploring the longer term effects on future land use patterns and travel behaviors of alternative transportation strategies. Because the model is not appropriately sensitive to land use patterns and transit development, potential transit demand was under predicted. We requested to UDOT that an expert panel or Delphi process be engaged to deal with the modeling deficiencies, but received no response to our request of February 14, 2007.

5

Comment 1880 (continued)

Response
Section in
Chapter 35
↪

Transit First

The development of transit systems to help balance our transportation system for the future is a key strategy in automobile congestion mitigation and improving air quality. Some communities around the United States have adopted a transit first policy to address the negative effects of increasing auto-dependence in their communities. Although all metropolitan areas have unique characteristics and geographical configurations, lessons learned from one can help others deal with similar problems of growth. San Francisco, California, for example, has a *Transit-First Policy* as part of its municipal code (San Francisco City Charter, Article XVI, Section 16.102) Its adoption was proposed by the San Francisco Planning and Urban Research Association (SPUR) a respected business and citizen agency acknowledging that "were it not for the transit-first policy, the city would have followed the path of so many other cities, widening roads, narrowing sidewalks, demolishing downtown buildings and then filling the spaces with parking garages." In advocating for the transit-first policy SPUR sought to "Fund transportation projects based on performance measures or criteria which consistently increase the share of non-automobile trips, improves air quality and reduce average vehicle miles traveled per capita."

Another example of a transit first commitment is Portland, Oregon, which decided years ago to build a light rail system, abandon several freeway projects and encourage smart growth and mixed-use development. As a result Portland has a national reputation of livability with transit ridership growing 20 percent faster than the rate of vehicle miles traveled. Others cities such as Dallas, Texas, have also prioritized rail transit in their growth plans and have seen the market respond with savvy developers proactively planning and developing projects in station areas.

The proper sequencing and prioritization of transit development is also the key land use-transportation strategy from the Blue Ribbon Advisory Council (BRAC) on Climate Change *Report to Governor Jon M. Huntsman, Jr.* October 3, 2007. The number one Transportation-Land Use Option proposed by the BRAC is TL-1 – Develop and Implement Aggressive Mass Transit Strategy that "has the potential to significantly reduce GHG (green house gases) and provide important co-benefits ... such as improving air quality and congestion mitigation." It notes that "Public support of the 2006 transit initiatives was high." The number two Transportation-Land Use Option proposed is TL-2 - Quality Growth Program which would "help reduce GHG emissions through a reduction in vehicle miles traveled." The DEIS must consider the ability of a full range of reasonable alternative transportation strategies to meet this key statewide planning goal. Moreover, recent court decisions have indicated that agencies are now obligated to consider the climate change implications of their decisions under NEPA and other statutes.

The rationale for investing in transit first was noted in the U.S. 10th Circuit Court of Appeals Decision on the Legacy Parkway, September 16, 2002 in which it stated the

6

Comment 1880 (continued)

Response
Section in
Chapter 35
↪

Agencies "simply did not take a hard look at whether public transit could alleviate the immediacy of the need for the I-15 expansion or Legacy Parkway construction."

Concerns about air quality and the increasing cost and decreasing potential availability of gasoline support the public call to implement a regional transit system as quickly as is feasible. As was noted in *The New York Times*, April 22, 2007 in a *National Perspectives* article *A Rail Line Drives Development in Utah*, "The existing and planned rail stations offer developers dozens of opportunities to design and build transit-focused home and business districts at the center of the Salt Lake Valley's towns and cities." In other words, transit investments lead development patterns which in turn affect trip demand and available travel choices.

There have been numerous other local newspaper articles highlighting the fact that in Murray, South Salt Lake, Farmington and elsewhere transit-oriented development zones are providing "synergy" with rail development. The developer of the Station Park development at the Farmington commuter rail station stated that, "At some point we'll hit a tipping point and it will be more convenient and cost-effective to take the train" (*Salt Lake Tribune*, December 27, 2007 *The Right Track*).

35.29A

The implementation of a high-capacity transit corridor on 5600 West before a new freeway is built will provide significant benefits to the Mountain View Corridor study area and the region in general. If we are true to our objective of a balanced transportation system that seeks to reduce VMT, a transit first alternative is reasonable and preferable. At a minimum, to comply fully with NEPA, one or more transit first alternatives must be considered fully and compared to the current preferred highway-dominated alternative using a range of relevant decision criteria (described in the Smart Mobility, Inc. comments).

35.29D

The DEIS screening analysis rejected transit first alternatives out of hand by arguing that they would result in unacceptable congestion on some roadway segments at some times of the day. This analysis was flawed for several reasons. First, as noted elsewhere and in the Smart Mobility, Inc. comments, the analysis was based on an outdated model that did not properly capture expected future demand (and the nature of and rate of growth in demand), as well as the ability of new, well-designed transit to meet that demand. Second, the analysis considered only alternatives that were not designed properly to maximize the effectiveness of a transit first strategy.

Building a freeway first will increase VMT and result in auto-dependent development patterns that will make balance more difficult. As noted in the attached *Comments on the Mountain View Corridor*, Smart Mobility, Inc., Jan 23, 2008, "In fact, the construction of the freeway would lead to increased decentralization of land use, causing higher future VMT, and higher costs, air pollution, and greenhouse gas emissions."

Comment 1880 (continued)

Response
Section in
Chapter 35
↪

35.2.3A

Air Quality

(1) VMT Growth worsening air quality.

The proposed Mountain View Corridor 6-8 lane freeway is currently sequenced decades before any planned 5600 West transit construction (WFRC Long Range Transportation Plan 2007). This scenario will inevitably increase the growth rate of VMT and commit the area to an automobile-dependent growth pattern, which will exacerbate the Wasatch Front's existing and future air pollution problems.

The Mountain View Vision's fourth principle – Balanced Transportation -- states: "We desire a balanced transportation system for our future that will involve more transportation choices. The phasing and implementation of transportation investments *over the next decade* will affect the land use development patterns and therefore affect future travel needs and the availability and effectiveness of other viable transportation choices."

35.3B

The current transportation investments presented in the MVC DEIS and WFRC's long-range transportation plan (6-8 lane freeway and absent any 5600 West transit construction through 2030) are completely inconsistent with the Mountain View Vision goals and will adversely affect the success of air quality improving objectives of the Mountain View Vision.

In addition, during winter months the Wasatch Front's valleys suffer severe high-pressure inversions that trap harmful pollutants close to the ground at breathing level. It is not uncommon during wintertime to have several weeks where the Department of Air Quality determines the air is unhealthy to breathe. During these periods, the state issues "voluntary no-drive days" in an effort to take measures to reduce the main air polluting culprit, automobile travel. This process asks people to voluntarily reduce vehicle use and shift to transit alternatives in an effort to protect citizens' health. The current sequencing scenario presented in the MVC DEIS and WFRC's long range transportation plan will present this area with little or no access to nearby transit that will greatly exacerbate Utah's inversion pollution problem, and render the goal of "no drive" days difficult to achieve. Similar results would also apply to summertime ozone management. A transit first scenario that reduces VMT growth would help manage this problem.

35.2.3A

35.12.1A

(2) Concentrated air pollution impacts near the proposed MVC freeway.

Several recent peer-reviewed scientific studies have demonstrated very strong correlations of severe health problems associated with people living near high-volume roads (freeways). The Mountain View Corridor will place several homes, schools, parks, and businesses dangerously near the proposed freeway and place thousands of people (especially children) at risk from freeway proximate, air pollution health problems. Prominent risks of the preferred 5800 West MVC alignment include impacts to Hunter High School and Hillside Elementary School, which will be in direct contact with the 4100 South/MVC interchange. In addition, Whittier Elementary School is less than 200 yards from the 3500 South/MVC interchange and Hunter Jr. High School is within 500 meters of the 5800 West alignment. Hunter Park will also be directly adjacent to a MVC

35.12.4A

Comment 1880 (continued)

Response
Section in
Chapter 35

interchange. Compounding this problem, the MVC DEIS (Community Impacts table 6.4-3) has identified 24 Salt Lake County schools and a senior center within ½ mile of the MVC freeway. Some of these increased health problems include cancer (including leukemia), asthma, respiratory illness, premature and low weight births, heart disease, and stroke. (*A selection of these peer reviewed studies are included below)

Children living with in 500 meters of a freeway showed substantial lung development deficiencies.

Researchers in southern California followed school children for 8 years (grades 4-12) and demonstrated strong evidence that living near freeways hindered lung development. (Attached)

Gauderman (2007) *The Lancet*, DOI:10.1016/S0140-6736(07)60037-3

Cancer risks are higher next to freeways.

The Multiple Air Toxics Exposure Study III (MATES-III) - A follow-up study to MATES II commissioned by California's South Coast Air Quality Management District demonstrates strong links between cancer and freeway mobile source pollution even with the addition of cleaner fuels. This study has the most recent and updated monitoring data on freeway induced, carcinogenic air toxins.

South Coast Air Quality Management District (2008)
<http://www.aqmd.gov/prdas/matesIII/matesIII.html>

Children living near busy roads more likely to develop leukemia, cancer.

A 2000 Denver study showed that children living within 250 yards of streets or highways with 20,000 vehicles per day are six times more likely to develop all types of cancer and eight times more likely to get leukemia.

Pearson, Wachtel, Robert L. Pearson, and Kristie Ebie. (2000). Distance-weighted traffic density in proximity to a home is a risk factor for leukemia and other childhood cancers. *Journal of Air and Waste Management Association* 50:175-180.

People living near freeways are exposed to 25 times higher rates of ultra-fine particulates.

A southern California study determined that ultra-fine particulates were up to 25 times higher out to 300 meters before stabilizing back to normal concentrations.

Zhu, Yifang, William C. Hinds, Kim Seongheon, Si Shen, Constantinos Sioutas. Concentration and size distribution of ultrafine particles near a major highway. *Journal of the Air and Waste Management Association*. September 2002. And, Study of ultrafine particles near a major highway with heavy-duty diesel traffic. *Atmospheric Environment*. 36(2002), 4323-4335.

[*Note: A new academic study led by UCLA researchers has revealed that the smallest particles (ultra-fine) from vehicle emissions may be the most damaging components of air pollution in triggering plaque buildup in the arteries, which can lead to heart attack and stroke. University of California, Los Angeles (2008, January 21). How Ultrafine Particles In Air Pollution May Cause Heart Disease. *ScienceDaily*. Retrieved January 21, 2008]

Comment 1880 (continued)

Response
Section in
Chapter 35

35.12.4F

Pregnant women who live near high traffic areas more likely to have premature and low birth weight babies.

Researchers observed an approximately 10-20 percent increase in the risk of premature birth and low birth weight for infants born to women living near high traffic areas in Los Angeles County.

Wilhelm, Michelle and Beate Ritz. (2002). Residential Proximity to Traffic and Adverse Birth Outcomes in Los Angeles County, California, 1994-1996. *Environmental Health Perspectives*. doi: 10.1289/ehp.5688

Proximity of a child's residence to major roads linked to hospital admissions for asthma.

A study in Birmingham, United Kingdom, determined that living near major roads was associated with the risk of hospital admission for asthma in children younger than five years of age. The area of residence and traffic flow patterns were compared for children admitted to the hospital for asthma, children admitted for non-respiratory reasons, and a random sample of children from the community. Children admitted with an asthma diagnosis were significantly more likely to live in an area with high traffic flow (more than 24,000 vehicles/ 24 hrs) located along the nearest segment of main road.

Edwards, J.; S.Walters, et al. (1994). Hospital admissions for asthma in preschool children: relationship to major roads in Birmingham, United Kingdom. *Archives of Environmental Health*. 49(4): 223-7.

A School's Proximity to Highways Associated with Asthma Prevalence.

A study of 1,498 children in 13 schools in the Province of South Holland found a positive relationship between school proximity to highways and asthma occurrence.

Van Vliet, P., M. Knappe, et al. (1997). Motor vehicle exhaust and chronic respiratory symptoms in children living near freeways. *Environmental Research*. 74(2): 122-32.

Truck traffic linked to childhood asthma hospitalizations

A study in Erie County, New York (excluding the city of Buffalo) found that children living in neighborhoods with heavy truck traffic within 220 yards of their homes had increased risks of asthma hospitalization. The study examined hospital admission for asthma amongst children ages 0-14, and residential proximity to roads with heavy traffic.

Lin, Shao; Jean Pierre Munsie; Syni-An Hwang; Edward Fitzgerald; and Michael R. Cayo; (2002). Childhood Asthma Hospitalization and Residential Exposure to State Route Traffic. *Environmental Research*, Section A, Vol. 88, pp. 73-81.

With the location of UDOT's 5800 West preferred alignment near schools and homes, and in addition to the numerous studies of scientific evidence supporting severe harm to people and school children near freeways, we consider this a "significant impact" to public health.

There are several known quantitative factors involving these concentrated freeway air pollution health impacts such as, projected traffic volumes, speeds, populations, distances from schools and homes etc. We believe that this significant public health threat requires an in-depth quantitative analysis and risk assessment. Given the serious potential

Comment 1880 (continued)		Comment 1880 (continued)	
Response Section in Chapter 35 ↳		Response Section in Chapter 35 ↳	
	impacts to health documented in the above-cited studies, the DEIS treatment of localized air toxics and other air pollution impacts on schools and other locations is cursory and unacceptable. NEPA requires that all reasonably foreseeable impacts of project alternatives be evaluated and disclosed fully, so that the decision agencies, other affected decision makers, and the public at large can make fully informed choices. Contrary to the assertion in the DEIS, sound methods are available to evaluate and to disclose these impacts, and to compare them to the impacts of transit first alternatives described above. NEPA therefore requires that these analyses and effects be performed and disclosed fully.		The alternative proposed by Citizens Organized for Smarter Transportation (COST) and Lehi City utilizes mixed-use arterials, transit and maximizes the effectiveness of Frontrunner Commuter Rail. The analysis prepared by COST and Lehi City of their alternative demonstrates better performance on effective transportation, community impacts, noise impacts, wetland impacts, and farmland impacts than the 2100 North Alternative. In addition, the COST/Lehi City proposal is better accepted by the citizens of Lehi who are most directly affected by the MVC in Utah County.
	35.12.3A (3) New standards for PM2.5. It is anticipated by WFRM that Salt Lake and Utah Counties will fail to meet the new PM2.5 requirements during the next MPO transportation planning cycle when the new standards go into effect. The MVC and its future vehicle traffic should be accountable under the new PM2.5 standard to determine if the MVC will generate future violations.		35.2.9A 35.2.6C Southern Freeway Alternative Utah County The Southern Freeway Alternative in Utah County should be abandoned from further consideration.
	35.6.1A Nuisances to the public The proposed MVC's impacts as a 6-8 lane freeway will create many nuisances and hardships to the surrounding communities. Hundreds of homes will be demolished and families uprooted. The remaining homes and populations left behind will have their property values and quality of life diminished. Established communities will be divided by the gigantic swath of a freeway and their children's schools will be next to the interchanges. Residents will suffer negative sight and noise impacts and will be placed at great new risk of severe health problems from concentrated air pollution generated by the MVC freeway. A transit first approach on a completed 5600 West and dispersing new road capacity increases on smaller roadway facilities would lessen these impacts.		Section 404 of the Clean Water Act provides that no discharge of dredged or fill material may be permitted if a practicable alternative exists that is less damaging to the aquatic environment. The Southern Freeway Option of the Mountain View Corridor would in fact inflict many direct and indirect damages to the aquatic environment of Utah Lake and its supportive wetland ecosystem. There are other practicable alternatives inside the MVC DEIS and in the COST/Lehi City proposal to the Southern Freeway Option that do not impair and damage the hydrology and wildlife habitat of Utah Lake.
	35.12.1A 35.29A Right-of-way / Footprint All MVC alternatives will affect valuable wetlands, farmlands, schools, parks, and historic properties. The CWA section 404 and 4f guidelines require that narrower footprints that would reduce these impacts should be considered. A transit first approach on a completed 5600 West that would reduce VMT growth and the amount of road capacity needed in these sensitive areas should be considered. In addition, the redesign of the Legacy Parkway in Davis County utilized roadway meandering and a smaller road footprint to avoid wetland impacts.		Wetlands are among the most productive ecosystems in the world and rival the best agriculture lands and the wetlands surrounding Utah Lake are no exception to this. These wetlands provide vital habitat for our fish and wildlife resources in the state. The wetland ecosystem surrounding Utah Lake acts as a very important breeding area and stopover for many migratory birds of the Pacific Flyway. There are more than 226 species of birds that depend upon these wetlands. Aside from the many avian species there are more than 16 species of reptiles and amphibians, 18 species of fish, and more than 49 mammalian species that are known to use and depend upon the wetland surrounding the lake.
35.15.4C	2100 North Alternative Utah County Although this alignment has less wetland impacts than the Southern Freeway alternative, we believe there is a better alternative transportation option for northern Utah County.		Having a large roadway in close proximity to wetlands, streams, and a lake can greatly alter wetland hydrology, decrease water quality, increase road kill, pose a risk to threatened species, fragment and isolate animal populations, and introduce toxins into the soil and in turn the surrounding plants. The Southern Freeway Option would introduce all of these negatives in an already fragile ecosystem, which could be disastrous and possibly catastrophic to the system. Besides the biological importance of the lake and wetlands there is also a cultural and historical importance of great value. Utah Lake and the surrounding wetlands have provided a vital source of food, resources, and gathering places for people in the valley for thousands of years. Out of respect and reverence to those who lived in this valley for thousands of years and thrived along the shores of the lake and wetlands we should preserve and protect not destroy and pollute the very system that has sustained thousands
	11		12

Comment 1880 (continued)

Response
Section in
Chapter 35

of generations of people in this valley. The wetlands surrounding Utah Lake are an integral part of our natural heritage and play a vital role in our environment.

We appreciate this opportunity to comment on such important transportation decisions that will affect the future quality of life in Utah.

Respectfully submitted,

Roger Borgenicht
Co-chair Utahns for Better Transportation
218 East 500 South
Salt Lake City, Utah 84111
(801) 355-7085
future@xmission.com

Marc A. Heileson
Sierra Club Southwest Regional Representative
2159 South 700 East, Suite 210
Salt Lake City, Utah 84106
(801) 467-9294
marc.heileson@sierraclub.org

cc:
TeriAnne Newell, UDOT
EPA Region 8
USACE Utah Office
UTA
FTA Region 8
USFWS
WFRC

13

Comment 1881

Response
Section in
Chapter 35

Articles

Effect of exposure to traffic on lung development from 10 to 18 years of age: a cohort study



W James Gauderman, Hita Vora, Bob McConnell, Kristi Beebe, Frank Gilliland, Duncan Thomas, Fred Loomans, Edward Axel, Niso Kundi, Michael Jerrett, John Peters

Summary

Background Whether local exposure to major roadways adversely affects lung-function growth during the period of rapid lung development that takes place between 10 and 18 years of age is unknown. This study investigated the association between residential exposure to traffic and 8-year lung-function growth.

Methods In this prospective study, 3677 children (mean age 10 years [SD 0.44]) participated from 12 southern California communities that represent a wide range in regional air quality. Children were followed up for 8 years, with yearly lung-function measurements recorded. For each child, we identified several indicators of residential exposure to traffic from large roads. Regression analysis was used to establish whether 8-year growth in lung function was associated with local traffic exposure, and whether local traffic effects were independent of regional air quality.

Findings Children who lived within 500 m of a freeway (motorway) had substantial deficits in 8-year growth of forced expiratory volume in 1 s (FEV₁, -81 mL, p=0.01 [95% CI -143 to -18]) and maximum midexpiratory flow rate (MMEF, -127 mL/s, p=0.03 [-243 to -11]), compared with children who lived at least 1500 m from a freeway. Joint models showed that both local exposure to freeways and regional air pollution had detrimental, and independent, effects on lung-function growth. Pronounced deficits in attained lung function at age 18 years were recorded for those living within 500 m of a freeway, with mean percent-predicted 97.6% for FEV₁ (p=0.013, relative to >1500 m [95% CI 94.6-99.4]) and 93.4% for MMEF (p=0.006 [95% CI 89.1-97.7]).

Interpretation Local exposure to traffic on a freeway has adverse effects on children's lung development, which are independent of regional air quality, and which could result in important deficits in attained lung function in later life.

Introduction

Both cross-sectional¹⁻³ and longitudinal⁴⁻⁶ studies have shown that lung function in children is adversely affected by exposure to urban, regional air pollution. Evidence has emerged that local exposure to traffic is related to adverse respiratory effects in children, including increased rates of asthma and other respiratory diseases.⁸⁻¹⁰ Cross-sectional studies in Europe have shown that deficits in lung function are related to residential exposure to traffic.¹¹⁻¹³ However, does traffic exposure have an adverse effect on lung-function development in children? The answer to this question is important in view of the extent of traffic exposure in urban environments and the established relation between diminished lung function in adulthood and morbidity and mortality.¹⁴⁻¹⁶

We investigated the association between residential exposure to traffic and 8-year lung-function development on the basis of cohort data from the Children's Health Study. We also studied the joint effects of local traffic exposure and regional air quality on children's lung development.

Methods

Participants

The Children's Health Study recruited two cohorts of fourth-grade children (mean age 10 years [SD 0.44], one in 1993 (cohort 1, n=1718) and the other in 1996 (cohort 2, n=1959). All children were recruited from schools in

12 southern California communities as part of an investigation into the long-term effects of air pollution on children's respiratory health.¹⁷⁻¹⁹ A consistent protocol was used in all communities to identify schools, and all students targeted for study were invited to participate.²⁰ Overall, 82% (3677) of available students agreed to participate. Pulmonary-function data were obtained yearly by trained field technicians, who travelled to study schools to undertake maximum effort spirometry on the children, using the same equipment and testing protocol throughout the study period. Details of the testing protocol have been previously reported.²⁰ Children in both cohorts were followed up for 8 years.

A baseline questionnaire, completed at study entry by each child's parent or legal guardian, was used to obtain information on race, Hispanic ethnic origin, parental income and education, history of doctor-diagnosed asthma, in-utero exposure to maternal smoking, and household exposure to gas stoves, pets, and environmental tobacco smoke.²¹ A yearly questionnaire, with similar structure to that of the baseline questionnaire, was used to update information on asthma status, personal smoking, and exposure to environmental tobacco smoke. For statistical modelling, a three-category socioeconomic status variable was created on the basis of total household income and education of the parent or guardian who completed the questionnaire. High socioeconomic status (23% of children, n=823) was defined as a parental

Published Online:
January 26, 2007
DOI:10.1016/S0140-6736(07)60037-3
See also Online Comment
DOI:10.1016/S0140-6736(07)60038-5
Department of Preventive
Medicine, University of
Southern California,
1540 Alcazar Street, Suite 220,
Los Angeles, CA 90033, USA
Dr W James Gauderman PhD, Hita Vora MS,
Prof R McConnell MD,
K Beebe PhD,
Prof F Gilliland MD,
Prof D Thomas PhD, E Axel MS,
Prof J Peters MD, Sonoma
Technology Inc, PC, Pittsburg,
CA 94564, USA
Dr Loomans MD, Respiratory
and Environmental Research
Unit, North Municipal
Division of Environmental
Health Sciences, School of
Public Health, University of
California, Berkeley,
CA 94720-7360, USA
(M Jerrett PhD)
Correspondence to:
Dr W James Gauderman
jung@ucla.edu

www.thelancet.com Published online January 26, 2007 DOI:10.1016/S0140-6736(07)60037-3

1